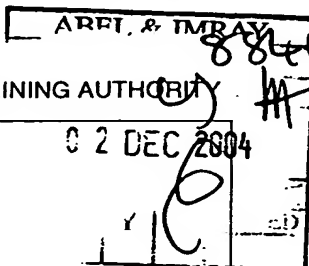


# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY



## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

To:

Whiting, Gary  
ABEL & IMRAY  
20 Red Lion Street  
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GRANDE BRETAGNE

Date of mailing  
(day/month/year)

30.11.2004

Applicant's or agent's file reference  
8841 WOGW

#### IMPORTANT NOTIFICATION

International application No.  
PCT/GB 03/03706

International filing date (day/month/year)  
28.08.2003

Priority date (day/month/year)  
16.09.2002

Applicant

D W SPINKS (EMBOSSING) LTD et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>8841 WOGW</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. <b>PCT/GB 03/03706</b>	International filing date ( <i>day/month/year</i> ) <b>28.08.2003</b>	Priority date ( <i>day/month/year</i> ) <b>16.09.2002</b>
International Patent Classification (IPC) or both national classification and IPC <b>D21H21/48</b>		
Applicant <b>D W SPINKS (EMBOSSING) LTD et al.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:
 

I ☒ Basis of the opinion

II ☐ Priority

III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

IV ☐ Lack of unity of invention

V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

VI ☐ Certain documents cited

VII ☐ Certain defects in the international application

VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>14.04.2004</b>	Date of completion of this report  <b>30.11.2004</b>
Name and mailing address of the international preliminary examining authority:  <div style="display: flex; align-items: center;"> <div>             European Patent Office              D-80298 Munich              Tel. +49 89 2399 - 0 Tx: 523656 epmu d              Fax: +49 89 2399 - 4465           </div> </div>	Authorized Officer  <b>Nestby, K</b>  Telephone No. +49 89 2399-8625



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/03706**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-14 as originally filed

**Claims, Numbers**

1-36 filed with telefax on 05.08.2004

**Drawings, Sheets**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/03706**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-36
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-36
Industrial applicability (IA)	Yes: Claims	1-36
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. According to the description of the present application on page 11, lines 22-32 "the fibres are manufactured from paper, e. g. tissue paper". The dimensions of the fibres include certain lengths and widths, see page 3, first paragraph. Typical widths are from 0.125 to 0.5 mm.

Therefore, the skilled person who knows that cellulose fibres used in papermaking have widths (diameters) in the micron range, e. g. from about 10 to about 50 microns (0.010 to 0.05 mm) - see Table 2-3 of the enclosed page 15 of G.A. Smook "Handbook for Pulp & Paper Technologists" - would understand that **the word "fibre" as used in the claims does not mean individual, single cellulose fibres but rather pieces of paper containing cellulose fibres.**

2. So-called planchets which are cut from a laminate of a cellulosic substrate, e.g. tissue paper, and a film, for use in the manufacture of security paper by addition to paper making stock are described in EP-A-0 342 929 (hereafter referred to as document D1).

Said planchets can be of any shape and may be in the range of from 0.1 to 10 mm (preferably between 0.5 to 2 mm) in size (see column 3, lines 8 to 37).

One side of the planchets (that is the film side 2) exhibits a visible surface effect, for example iridescence, fluorescence; the other side, i. e. the paper substrate 1 may be coloured to increase distinctiveness (see in particular column 3, lines 38-41 and figures 1 to 3).

3. As follows from the foregoing items 1 and 2, document D1 can be considered to represent the most relevant state of the art. It discloses a fibrous planchet, a method of manufacturing such a planchet, a method of manufacturing a paper product and a paper product from which the subject-matter of claims 1, 18, 35, 36 differs only in that the coloured regions (which are a plurality) have been printed and are visible only under UV light.

- 3.1 The problem to be solved by the present invention may therefore be regarded as providing counterfeit protection that addresses at least some of the problems mentioned in the third paragraph on page 1 of the description of the present

application.

- 3.2 The solution proposed in claims 1, 18, 35, 36 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The distinguishing feature "plurality of printed regions which are coloured with colours visible under UV light" is described as security feature in the following documents

D2 : US-A-4 897 300

D3 : EP-A-0 388 090

D4 : EP-A-0 520 060 (see in particular the paragraph bridging columns 2 and 3)

as providing the same advantages and effects as in the present application, see e.g. column 2, lines 1-7 of D2 ("rainbow effect") and column 4, lines 9 to 18 ("rainbow printing fashion") of D3. The skilled person would therefore regard it as a normal option to include this feature in the fibrous planchet and methods described in document D1 in order to solve the problem posed thereby arriving at the subject-matter of claims 1, 18, 35, 36 without having to exercise any inventive skill.

4. Dependent claims 2 to 17, 19 to 34 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, because said features are trivial and known from the documents D1 to D4 as well as the other documents cited in the Search Report.

DT12 Rec'd PCT/PTO 14 MAR 2005

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Claims

1. A fibre having a plurality of regions printed on front and rear sides of said fibre, wherein said regions are  
5 coloured and the colours are visible only under ultra-violet light.
2. A fibre as claimed in claim 1, wherein said regions are striped regions and said striped regions include two or more  
10 differently coloured striped regions.
3. A fibre as claimed in claim 2, wherein said striped regions are placed at about 1mm gradations.
- 15 4. A fibre as claimed in claim 2 or claim 3, wherein the coloured striped regions appear in the same order in a repeating pattern.
5. A fibre as claimed in claim 2 or claim 3, wherein said  
20 fibre comprises only two striped regions, the first striped region having a first colour and the second striped region having a second colour.
6. A fibre as claimed in claim 5, wherein each of said  
25 striped regions covers half of said fibre.
7. A fibre as claimed in any one of claims 2 to 4, wherein said striped regions include three or more differently coloured striped regions.
- 30 8. A fibre as claimed in claim 1, wherein the regions are arranged in a pseudo-random pattern.

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9. A fibre as claimed in claim 1 or claim 8, wherein said regions include two differently coloured regions.

10. A fibre as claimed in claim 9, wherein said fibre  
5 comprises only two regions.

11. A fibre as claimed in claim 10, wherein each of said regions covers half of said fibre.

10 12. A fibre as claimed in claim 1 or claim 8, wherein said regions include three or more differently coloured regions.

13. A fibre as claimed in any preceding claim, wherein the regions are printed such that regions on the front and rear  
15 sides are in register with one another and have the same colour.

14. A fibre as claimed in any preceding claim, wherein the regions abut one another with no overlap of colour at the  
20 boundaries of the regions.

15. A fibre as claimed in any preceding claim, wherein the fibre is cut from a larger fibre.

25 16. A fibre as claimed in any preceding claim, wherein a varnish is applied to the outer surface of the fibre.

17. A fibre as claimed in any preceding claim, wherein the fibre is manufactured from tissue paper.

30

18. A method of manufacturing a fibre, the method comprising the steps of printing a plurality of regions on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light.



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19. A method as claimed in claim 18, wherein said regions are striped regions and said striped regions include two or more differently coloured striped regions.

5

20. A method as claimed in claim 19, wherein said striped regions are placed at about 1mm gradations.

21. A method as claimed in claim 19 or claim 20 and further comprising the step of printing the plurality of coloured striped regions in the same order in a repeating pattern.

10

22. A method as claimed in claim 19 or claim 20, wherein said fibre comprises only two striped regions, the first striped region having a first colour and the second striped region having a second colour.

15

23. A method as claimed in claim 22, wherein each of said striped regions covers half of said fibre.

20

24. A method as claimed in any one of claims 19 to 21, wherein said striped regions include three or more differently coloured striped regions.

25. A method as claimed in claim 18, wherein the regions are arranged in a pseudo-random pattern.

25

26. A method as claimed in claim 18 or claim 25, wherein said regions include two differently coloured regions.

30

27. A method as claimed in claim 26, wherein said fibre comprises only two regions.

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28. A method as claimed in claim 27, wherein each of said regions covers half of said fibre.

29. A method as claimed in claim 18 or claim 25, wherein  
5 said regions include three or more differently coloured regions.

30. A method as claimed in any one of claims 18 to 29,  
wherein the regions are printed such that regions on the  
10 front and rear sides are in register with one another and have the same colour.

31. A method as claimed in any one of claims 18 to 30,  
wherein the regions abut one another with no overlap of  
15 colour at the boundaries of the regions.

32. A method as claimed in any one of claims 18 to 31,  
wherein the fibre is cut from a larger fibre.

20 33. A method as claimed in any one of claims 18 to 32,  
wherein the method further comprises the step of applying a varnish to the outer surface of the fibre.

34. A method as claimed in any one of claims 18 to 33,  
25 wherein the fibre is manufactured from tissue paper.

35. A method of manufacturing a paper product, the method comprising the steps of:

30 mixing one or more fibres as claimed in any one of claims 1 to 17 or one or more fibres manufactured using the method of any one of claims 18 to 34 with slurry paper pulp such that the fibres form a hydrogen bond with the cellulose fibre in the paper pulp; and

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forming the paper pulp and fibre mix into a continuous web of paper.

36. A paper product containing a plurality of fibres as  
5 claimed in any one of claims 1 to 17 or manufactured using  
the method of any one of claims 18 to 34.

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